

REMARKS

Upon entry of the present amendment, claims 1 and 14 will have been amended, while claims 5, 9-13, 18, and 19 will have been canceled.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections set forth in the above-mentioned Official Action, together with an indication of the allowability of all of the claims pending in the present application.

Applicants further wish to thank Examiner Maki for his outstanding courtesy and cooperation exhibited during the short telephone call conducted on May 27, 2004. During the above-noted call, Applicants undersigned representative discussed the features of the present invention and the advantages thereof with respect to the prior art. The Examiner noted that he would need to further review the application in view the present amendment.

In the outstanding Office Action, the Examiner has rejected claims 1-4, 6-8, and 14-17 under 35 U.S.C. § 112, first and second paragraphs, as failing to comply with the written description requirement and as failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

With respect to the 35 U.S.C. § 112, first and second paragraph rejections, Applicants do not necessarily agree with the Examiner's rejection, however Applicants have amended claims 1 and 14 in order to expedite prosecution. In this regard, claims 1 and 14 have been amended to recite that the air pressure is

provided to “the centerer to extend said contact pins” in order to make the claim language more explicit. This amendment finds support in, inter alia, figure 10. In the disclosed figure 10, the centerer includes, inter alia, pins 39, boss 24, and cylinders 40 with an air source 41 being connected to the centerer as shown. This amendment clarifies that the air from the air source does not necessarily contact the pins 39, but that the air source does provide the force for the centerer to extend the contact pins.

Furthermore, the recitations of “high pressure” have been deleted to be more consistent with the specification. With this modification, Applicants respectfully assert that claims 1 and 14 are not indefinite and the 35 U.S.C. § 112, second paragraph rejection has been overcome. Similarly, Applicants respectfully assert that rejection under 35 U.S.C. § 112, first paragraph has been overcome in that the claims comply with the written description requirement.

The Examiner has rejected claims 1, 3, 4, 6, 14, and 16 under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. EP 706178 in view of Japanese Patent No. JP 4-57234, and Japanese Patent No. JP 63-213137; the Examiner has rejected claims 2, 7, 8, and 15-17 under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. EP 706178 in view of Japanese Patent No. JP 4-57234, and Japanese Patent No. JP 63-213137, and further in view of Japanese Patent No. 4-139630; the Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. EP 706178 in view of Japanese Patent No. JP 4-57234, Japanese Patent No. JP 63-213137, and

further in view of U.S. Patent 5,227,213 to KOMORI et al.; and, the Examiner has rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over European Patent No. EP 706178 in view of Japanese Patent No. JP 4-57234, and Japanese Patent No. JP 63-213137 and further in view of Japanese patent No. JP 8-3786.

Applicants respectfully traverse and assert that each of these rejections is inappropriate.

With respect to the rejection of claims 1 and 14, Applicants assert that the applied combination do not recite the claimed combination of features including the recitation of extending contact pins in a radial direction to press against the center hole of the substrate.

In this regard, EP 706178 is silent to any centering device, as admitted by the Examiner.

JP 4-57234 discloses a centering device that comprises divided shaft members 18 and 20 that move in opposite directions to engage the inner diameter of holes 12a and 14a. The JP 4-57234 reference discloses fitting a first substrate 2 to a upper jig 6 and a second substrate 4 to a lower jig 8 and the two shaft members 18 and 20 are pushed downward and guided by a tapered shaft portion 24a of a guided member 24. This moves shafts 18 and 20 away from one another to contact holes 12a and 14a.

JP 63-213137 uses an air cylinder 3 for raising pin 4, so that the head part 4b of the pin 4 passes into a cavity of the lugs 5, 6. After the pin 4 is further

raised, the lugs 6 will contact the substrate due to the coaction of the tapered part 4a of the pin 4 with a surface of the lugs 5, 6. Thus, JP 63-213137 merely teaches that the tapered shaft 24a of JP 4-57234 can be moved vertically by air pressure.

Thus, there is no suggestion or disclosure in EP 706178 , JP 4-57234, JP 63-213137 separately, or in any proper combination of extending pins in a radial direction by air pressure as recited by independent claims 1 and 14.

On the contrary, the present disclosed invention has a centerer that includes at least two contact pins that extend in a radial direction to contact an inside circumferential surface of the center holes of the substrate through the use of a pressure source 41 that supplies air pressure to the centerer to extend the contact pins. These pins retractably extend in a radial direction to press against the substrates. Thus, the disclosed invention potentially causes less damage to the substrates, has fewer mechanical parts, and can be more compact.

Furthermore, Applicants respectfully assert that there is a lack of motivation to modify the combination of references in the manner set forth in the Official Action. More specifically, there is no motivation to modify EP 706178 to have jigs 6 and 8 and shafts 18 and 20 of Japanese Patent No. JP 4-57234, and to have the air operation of Japanese Patent No. JP 63-213137. In other words, one of ordinary skill could not be motivated to modify these references in the manner stated by the Examiner. Furthermore, such a modification could not be made without using impermissible hindsight.

In this regard, Applicant's note the EP 706178 teaches that during curing of a photopolymer resin 10 by UV irradiation, a transparent plate 11 (glass plate) is pressed onto the substrate in order to prevent deformation of the substrates 1 and 5 (see column 13 and figure 2).

The Examiner's proposed modification would modify the EP 706178 to have the positioning jigs 6, 8 and shafts 18, 20, of JP 4-57234. However, in such a combination, the disc substrates that are to be laminated would be held by pressure between the upper and lower jigs. The glass plate 11 of EP 706178 might be damaged or destroyed due to the pressure applied by the upper jig. Moreover, the glass plate 11 of EP 706178 does not appear to be able to accommodate shafts 18, 20. In other words, the Examiner's proposed combination might not be operative, might result in damaging the discs, or might damage the manufacturing apparatus.

Thus, Applicants respectfully assert that it is technically illogical to modify EP 706178 to have the jigs 6, 8, and shafts 18, 20 of JP 4-57234 as proposed by the Examiner. Moreover, the English language abstract of JP 63-213137 does not indicate that this invention is used during a lamination process or is used for centering two discs. Rather the lugs center a transparent substrate 8 with respect to a base 1 of the manufacturing jig. Additionally, JP 63-213137 appear to relate to attaching a substrate to a center hub rather than to aligning two substrates. As such, there is even less proper motivation to combine the EP 706178, JP 4-57234, and JP 63-213137 references. In other words, one of ordinary skill would not be motivated to combine the references as set forth in the Official Action.

In response to the Examiner's remarks in the Advisory Action mailed May 6, 2004, Applicants respectfully assert that the claims now do not recite that the air pressure is conveyed to the pins. The claims now recite that the air source is what causes the pins to extend. In particular, the air source is connected to the centerer. The centerer, as shown in figure 10 being disclosed in the specification as including cylinders 40. Thus, Applicants respectfully assert that the claims do not contain any new matter and comply with the written description requirement.

Further in response to the Examiner's remarks in the Advisory Action, Applicants do not mean to assert that the present claims require or do not require jigs. Applicants merely wish to indicate the manner in which the applied references could be modified and then show that the modification would not be obvious to one of ordinary skill in the art due to the different components and technical approaches utilized for each of the prior art devices.

With regard to dependent claims 2, 3, 4, 6-8, and 15-17, Applicant asserts that they are allowable on their own merit and at least because they depend on one of independent claims 1 and 14, which Applicants submit have been shown to be allowable.

In view of the fact that none of the art of record, whether considered alone or in any proper combination, discloses or suggests the present invention as defined by the pending claims, and in further view of the above remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

SUMMARY AND CONCLUSION

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have pointed out the specific language of Applicants' claims that define over the references of record and respectfully request an indication to such effect, in due course.

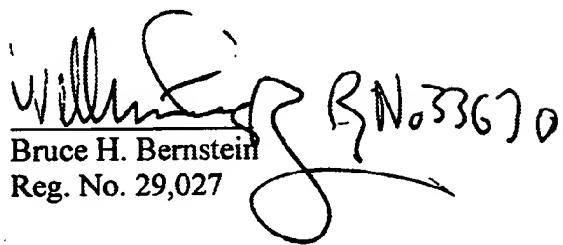
The amendments to the claims made in this amendment have not been made to overcome the prior art, and thus, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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